In the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application. Please cancel claims 1 and 4, add claim 21 and amend claims 2-5, 8, 14, 17, and 20 as follows:

1.   (Canceled)

2.   (Currently Amended) The method of claim 21, further comprising:

measuring the coexistent gas component using FTIR; and

directly applying resulting data from the correcting calculations.

3.   (Currently Amended) The method of claim 21, further comprising:

measuring the coexistent gas component using a method other than FTIR; and

using an external analyzer to read resulting data from the correcting calculations, wherein time matching is performed by a CPU of the FTIR.

4.   (Canceled)

5.   (Currently Amended) The method of claim 21, wherein the correcting step corrects influences of coexistent H_2O with respect to CO, CO_2, NO, and N_2O.

6.   (Original) The method of claim 5, wherein the influence is approximated by a linear equation for a fixed H_2O concentration.

7.   (Original) The method of claim 5, wherein the influence is approximated by a quadratic equation for a fixed H_2O concentration.

8.   (Currently Amended) The method of claim 21, wherein the correcting step corrects influences of coexistent H_2O with respect to CO.

9.   (Original) The method of claim 8, wherein the influence is approximated

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by a linear equation for a fixed H_2O concentration.

10.   (Original) The method of claim 8, wherein the influence is approximated by a quadratic equation for a fixed H_2O concentration.

11.   (Currently Amended) The method of claim 21, wherein the correcting step corrects influences of coexistent H_2O with respect to CO_2.

12.   (Original) The method of claim 11, wherein the influence is approximated by a linear equation for a fixed H_2O concentration.

13.   (Original) The method of claim 11, wherein the influence is approximated by a quadratic equation for a fixed H_2O concentration.

14.   (Currently Amended) The method of claim 21, wherein the correcting step corrects influences of coexistent H_2O with respect to NO.

15.   (Original) The method of claim 14, wherein the influence is approximated by a linear equation for a fixed H_2O concentration.

16.   (Original) The method of claim 14, wherein the influence is approximated by a quadratic equation for a fixed H_2O concentration.

17.   (Currently Amended) The method of claim 21, wherein the correcting step corrects influences of coexistent H_2O with respect to N_2O.

18.   (Original) The method of claim 17, wherein the influence is approximated by a linear equation for a fixed H_2O concentration.

19.   (Original) The method of claim 17, wherein the influence is approximated by a quadratic equation for a fixed H_2O concentration.

20.   (Currently Amended) The method of claim 21, wherein the correcting step corrects influence caused by a difference in water concentration between exhaust

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Appl. No.: 09/578,998
Amdt dated December 10, 2003
Reply to Office Action of July 3, 2003

Patent
14402-0062

gases and a calibration gas and a change in H2O concentration in a sample gas being measured.

21.   (New) A multi-component gas analyzing method using FTIR, comprising:

quantitatively analyzing a plurality of components in a sample based upon an absorption spectrum obtained by FTIR;

calculating multi-component concentrations from a mixed gas spectrum by using a quantitative algorithm; and

after calculating the multi-component concentrations, correcting for an influence due to a difference in a base gas composition between and exhaust gas and a calibration gas.